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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,991	09/05/2003	Wen-Yuen Wu	WUWE3003/REF	6680
23364	7590	07/05/2006	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			WERNER, JONATHAN S	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/654,991	Applicant(s) WU, WEN-YUEN	
	Examiner Jonathan Werner	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because Figure 13-B shows a multiple occurrence of the outer crown (30), in which said crown (30) appears to still be attached to the inner crown (20) and the top portion (T) even though the two elements are meant to be separated. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-6 are objected to because of the following informalities: Examiner recommends the preamble read “A method of preventing an inner crown of a removable restoration tooth from becoming disengaged with a natural abutment tooth, comprising the steps of:” in order to clarify each component claimed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Daftary (US 5,073,111). Daftary shows an inner crown of a removable restoration tooth in Figure 2, having a bottom, a top, an outer surface, and an interior surface provided with a space extending from said bottom toward said top in such a manner that an inner diameter of the space is progressively smaller from the bottom toward the top, said outer surface having a top edge contiguous to said top, said outer surface further having a bottom edge contiguous to said bottom; and wherein the crown is provided with a through hole (91) in communication the space of the outer surface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (US 5,071,345) in view of Willoughby (US 6,283,753). As to claims 1-2 and 4, Rosen discloses providing an inner wall of an inner crown (136) with a cement coating; fitting the inner crown over an abutment (116) such that the inner crown is secured to the abutment by the cement coating (column 5, lines 20-22); providing a through hole in an upright wall of the crown whereby the hole extends into the abutment to form a retaining hole in the abutment and wherein the retaining hole is corresponding in hole diameter to the through hole (Figure 4); and inserting a retention pin (140) into the retaining hole of the abutment via the through hole of the inner crown (Figure 4). Rosen fails to disclose the step of trimming one end of the retention pin so that it is level with an outer surface of the upright wall of the inner crown. Willoughby, however, teaches an implant abutment system as described above in which a retention pin is trimmed (column 31, lines 7-12). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to trim the end of the retention pin in order to ensure it was flush to the axial wall of the abutment as taught by Willoughby. As to claim 3, Rosen additionally shows a second through hole in the other upright wall of the crown that is in communication with the retaining through hole of the abutment (Figure 4). As to claim 6, Willoughby also discloses casting a metal crown according to a crown wax-up (column 4, lines 4-8; column 29, lines 21-24).

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5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (US 5,071,345) in view of Willoughby (US 6,283,753) further in view of Rosen (US 5,082,442).

Rosen and Willoughby disclose the system as previously described but fail to show that when the retention pin is inserted into the retaining hole, the two ends of said pin are jugged out of each side of the through hole. However, Rosen (5,082,442) teaches a dental crown, abutment and retention pin combination in which a through hole is formed on each side of the crown and a retention pin is used through each hole (Figure 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to have a through hole that extends all the way through each side wall in order to pass other elements through the abutment and crown, such as a an archwire as taught by Rosen.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daftary in view of Kasama (US 4,318,696). Daftary discloses the dental crown as previously described, but fails to show the top of the crown has a hole in communication with said space. Kasama, however, teaches a dental inner crown similar to that of Daftary, but which also has a hole (8) in the top of the crown (Figure 6). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to include a hole in the top of an inner crown in order to enhance the echo effect of the bounding sound produced by chewing as taught by Kasama.

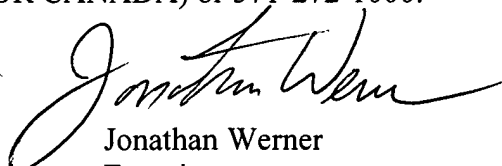
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to included form PTO-892 for all additional pertinent prior art related to dental crowns.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Werner whose telephone number is (571) 272-2767. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jonathan Werner
Examiner
TC 3700

6/22/06



MELBA N BUMGARNER
PRIMARY EXAMINER